

## REMARKS/ARGUMENTS

Claims 1 – 30, 32, 33 and 35 – 41 are submitted for examination.

Claims 31 and 34 are hereby canceled.

Original claims 1 – 9 and 35 are allowed.

Amended claims 10 – 29 were rejected under 35 USC §112 as “failing to comply with the written description requirement”

Original claim 30 was rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,865,978 to E.C. Kash.

Original claims 31 and 34 were rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,520,258 to W. Yang et al.

Original claims 32 and 33 were allowed on the condition of being rewritten in independent form including all of the limitations of the respective base claims.

Claims 36 – 41 are new.

Additional to the foregoing action on Applicant's claims 1 – 35, the Examiner has invoked the provisions of 35 USC §132(a) to require cancellation of specification text submitted by Applicants' amendment of January 3, 2006.

Original claims 31 and 34 that were rejected as anticipated by the W. Yang et al reference are hereby cancelled. Construction of the Yang et al disclosure, therefore, is no longer an issue.

The Examiner's allowance of claims 1 – 9 and 35 is greatly appreciated. In particular, allowance of these claims simplifies the remaining issues and provides a basis for mutual understanding of the prior art.

The 35 USC §102(a) rejection of Applicants' claim 30 as anticipated by the Kash disclosure is respectively traversed as unsubstantiated by the reference. Claim 30 describes an explosive shaped charge formed without a base casement. Applicants' specification text justifying this claim is found in paragraph [0055]; “In lieu

of the omitted steel case, each shaped charge unit may be a) press formed within a molding die using no dedicated casement". The Kash et al invention is directed to a laminated outer gun tube wall 210. The shaped charges 420 of Kash et al are traditional prior art. Referring to Kash et al, column 6, lines 15 – 17, "The charge 420 includes the explosive charge 410, shaped charge body 324, primer vent 325 and retainer cone 326". **It is the shaped charge body 324 of Kash et al that Applicants' claim 30 is expressly omitting.** It is a prior art given that shaped charges are formed by press molding powdered explosive material into a dedicated, heavy wall case. The explosive and case become an integral unity. The case confined explosive is combined with a gun tube as a singular unit. **Nothing in the Kash et al disclosure suggests any departure from this established, prior art practice.** Nomenclature differences notwithstanding, the "shaped charge body 324" of Kash et al is the "base casement" that is specifically omitted from Applicants' shaped charge. Applicant's die formed explosive is combined with his gun structure without such a "shaped charge body". It may only be assumed that the rejection presumption of separating the Kash et al explosive charge 410 from the "shaped charge body" 324 for the purpose of rejecting applicants' claim 30 is a **concept having origin only in Applicant's disclosure: a practice long prohibited by the patent case law.** Accordingly, withdrawal of the rejection is respectfully requested.

The Office rejection of claims 10 – 29 under 35 USC §112 is part and parcel of the 35 USC §132(a) objection to Applicants' January 3, 2006 amendment. The rejection and objection are both traversed as unjustified by the cited law. Accordingly, withdrawal of the rejection of claims 10 – 29 and the requirement to cancel the amendment text is respectfully requested.

The Examiner's justification for the 35 USC §112 rejection and §132(a) objection is fundamentally based upon the 35 USC §132(a) prohibition that "No amendment shall introduce new matter into the disclosure of the invention". However, "Amendments to an application which are supported in the original description are NOT new matter". M.P.E.P. §2163.07. "Mere rephrasing of a passage does not

constitute new matter. Accordingly, a rewording of a passage where the same meaning remains intact is permissible". M.P.E.P. 2163.07¶I. Applicants' January 3, 2006 amendment of paragraph [0044] reads as follows:

**[0044]** Those of skill in the art are knowledgeable of several techniques for orienting a horizontally positioned downhole tool with respect to a vertical plane. As a non-illustrated example, the outer perimeter of a charge carrier wall may be fabricated eccentrically of the inner bore perimeter thereby creating a weighted moment of wall mass concentration eccentrically concentrated about the charge carrier axis. If allowed to rotate about the charge carrier axis, the line of eccentrically concentrated wall mass will seek a bottom-most position.

The italicized word *eccentrically* in the above paragraph [0044] is an original disclosure term. The amendment the Examiner finds objectionable is merely a **repetition of the same term in the same sentence** to emphasize the same meaning. Use of the same term, *eccentrically*, in the next sentence has the same effect. In the terms of M.P.E.P. 2163.07¶I, applicants amendment of paragraph [0044] is merely a "rephrasing" of an original passage "where the same meaning remains intact".

Applicant's January 3, 2006 amendment of paragraph [0047] reads as follows:

**[0047]** The loading tube 39 is stepped on opposite sides of a ridge 38 to coaxially assemble within the gun tube wall 35 between the ballast rails 37. This ridge confinement necessarily orients the discharge plane of the shaped charge units 40. The mass of the eccentrically concentrated ballast rails 37 provides a gravitational bias to a vertical orientation of the outer gun tube 35. The V-channel between the ballast rails 37 keys the angular orientation of the loading tube 39 relative to the outer gun tube 35. The shaped charge 40 may given any desired angular orientation within the loading tube 39 for the discharge axis of the perforating jet 32 relative to the ridge key 38. The relative orientation illustrated by Figs. 2, 3 and 4 represents a shaped charge discharge axis 32 that is parallel with a vertical plane. However, the angular direction of the shaped charge discharge jet 32 about the gun axis may be set at any convenient or desired angle relative to the vertical plane. Hence, the perforation axis of the jet 32 relative to a gravity vertical may be predetermined.

It is Applicant's contention that the amendment of paragraph [0047] merely recites

“function, theory or advantage” that is an inherent function, property or operation of the device originally disclosed as expressly sanctioned by M.P.E.P. 2163.07(a).

Analysis of the issue is buttressed by Applicant's original disclosure paragraph [0009].

To wit:

**[0009]** A multiplicity of charge units is usually distributed along the length of each charge carrier. Typically, the shaped charge units are oriented within the charge carrier to discharge along an axis that is radial of the carrier longitudinal axis. The distribution pattern of shaped charge units along the charge carrier length for a vertical well completion is typically helical. However, horizontal well completions may require a narrowly oriented perforation plane wherein all shaped charge units in a carrier discharge in substantially the same direction such as straight up, straight down or *along some specific lateral plane in between*. In these cases, selected sections of charge carriers that collectively comprise a perforation gun may be joined by swivel joints that permit individual rotation of a respective section about the longitudinal axis. Additionally, each charge carrier is *asymmetrically* weighted to gravity bias the predetermined rotational alignment when the gun system is horizontally positioned.

Please notice that Applicants' **original** specification used two descriptive characterizations of mass distribution about a longitudinal rotational axis of a charge carrier e.g. “eccentric” and “asymmetric”. Webster's NEW WORLD DICTIONARY OF AMERICAN ENGLISH, THIRD COLLEGE EDITION, defines “eccentric” as “not having the same center, as two circles one inside the other” (but not having concentric axes). The same reference defines “asymmetrically” as an adverb form of “asymmetry”. Asymmetry is defined as a “lack of symmetry”. Symmetry is defined by the reference as “similarity of form or arrangement on either side of a dividing line or plane”. A rational analysis of these two definitions would conclude that “eccentric” is a more narrow sub-set of “asymmetric”. In either case, however, it must be concluded that Applicants' specification has described an unequal distribution of mass about a charge carrier axis.

With respect to Applicants' phrase, “eccentrically concentrated ballast rails”, reference is also given to the invention cross-section drawing of Fig. 4. The cross-hatched area 37 represents the “ballast rails 37 secured to the inner wall surface of an outer gun tube 35” described by Applicants' paragraph [0045]. The “outer gun tube

35" is normally perceived a pipe having a circular cross-section. In particular, the outer gun tube is specifically illustrated as having a circular cross-section. Relating these observations and definitions to Applicants' Fig. 4, it is believed to be the Examiner's burden to explain how the disposition of Applicants' ballast rails 37 within the circular gun tube 35 are **not** "eccentrically" concentrated about the axis of the gun tube circle. The drawing is the very embodiment of the definition.

The Examiner's objection to Applicants' amendment of paragraph [0044] is also focused upon Applicants' description of the shaped charge 40 as "given any desired angular orientation within the loading tube 39 for the discharge axis of the perforating jet 32 relative to the ridge key 38". Respectfully, the Examiner's attention is directed to Applicants' original paragraph [0009] where orientation of a perforation gun discharge axis is described specifically.

"horizontal well completions may require a narrowly oriented perforation plane wherein all shaped charge units in a carrier discharge in substantially the same direction such as **straight up, straight down or along some specific lateral plane in between**. In these cases, selected sections of charge carriers that collectively comprise a perforation gun may be joined by swivel joints that permit individual rotation of a respective section about the longitudinal axis. Additionally, **each charge carrier is asymmetrically weighted to gravity bias the predetermined rotational alignment when the gun system is horizontally positioned.**"

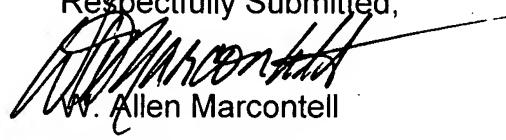
Perhaps the Examiner can explain why the description "straight up, straight down or along some specific lateral plane in between" is not synonymous with "any angular orientation". The Examiner's expansive explanation is also requested of how he interprets the meaning of "the perforation axis...may be predetermined" to be different from "weighted to gravity bias the predetermined rotational alignment" to describe the perforation plane orientation of an axially rotatable shaped charge carrier as expressed in Applicant's original specification paragraph [0009].

In brief summary, the Examiner's 35 USC §132(a) objections and 35 USC §112 rejections are misplaced. Applicants' January 3, 2006 amendments merely represent rephrasing of original text (*In re Anderson*, 471 F.2d 1237, 176 USPQ 331

(CCPA 1973)) or an expanded description of the inherent function, theory or advantage of an originally disclosed mechanism (*In re Reynolds*, 443 F.2d 384, 170 USPQ94 (CCPA 1971)). Accordingly, withdrawal or the rejection and cancellation requirement is respectfully requested.

In view of the foregoing amendments, arguments and remarks, Applicants' respectfully request the Examiner's reconsideration and allowance of claims 1 – 30, 32, 33 and 35 - 41 as clearly patentable over the cited prior art.

Respectfully Submitted,



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